

1 **WHAT IS CLAIMED IS:**

2 1. A method of spot-plating selected areas of metal traces on a printed circuit board,
3 comprising:

- 4 (a) providing a partially-conductive printed circuit board substrate having said metal
5 traces formed thereon;
6 (b) applying a plating voltage to said substrate; and
7 (c) performing an electrolytic plating operation on said substrate;

8 2. A method in accordance with claim 1, wherein said partially-conductive printed circuit
9 board substrate has a conductivity in a range between 10^6 and 10^8 Ω per square centimeter.

10 3. A method in accordance with claim 1, further comprising:

- 11 (d) heat-treating said substrate after said step (c) of electroplating, thereby reducing
12 said conductivity of said substrate.

13 4. A method in accordance with claim 1, further comprising:

- 14 (d) curing said substrate with ultraviolet light after said step (c) of electroplating,
15 thereby reducing said conductivity of said substrate.

16 5. A printed circuit board, comprising:

- 17 a substrate composed of a partially conductive material;
18 at least one metal trace formed on said substrate;

19 wherein said substrate is adapted have a plating voltage applied thereto to facilitate a
20 spot-plating operation on said at least one metal trace.

21 6. A printed circuit board in accordance with claim 5, wherein said substrate is composed
22 of a partially-cured material and is adapted to be subjected to a curing operation subsequent to
23 said spot-plating operation.

24 7. A printed circuit board in accordance with claim 5, wherein said partially conductive
25 material has a conductivity in a range between 10^6 and 10^8 Ω per square centimeter.

26 8. A method of applying metal traces to a printed circuit board substrate, comprising:

- 27 (a) providing a partially conductive substrate;
28 (b) applying an electroplating voltage to said substrate;
29 (c) electroplating said metal traces to said substrate using said electroplating voltage.

- 1 9. A method in accordance with claim 8, further comprising:
2 (d) heat-treating said substrate, thereby reducing said partial conductivity thereof.
- 3 10. A method in accordance with claim 8, further comprising:
4 (d) curing said substrate, thereby reducing said partial conductivity thereof.
- 5 11. A method in accordance with claim 8, further comprising:
6 (d) while said electroplating voltage is applied to said substrate, performing an
7 electrolytic spot-plating operation on said traces.